

AMENDMENTS TO THE CLAIMS

25. (Currently Amended) A method for dynamically tuning a directional antenna of a wireless device for communicating with an access point in a short-range wireless networking environment including at least one wireless device and at least one access point, comprising the steps of:

~~providing at least one wireless device;~~

~~providing at least one access point;~~

establishing a network link between a selected one of the wireless devices and a selected one of the access points using the directional antenna of the selected wireless device and an omnidirectional antenna of the selected access point; and setting a position of the directional antenna to minimize a bit error rate along the established link;

wherein the selected wireless device is an extension point device having a portable energy source.

26. (Original) The method according to claim 25, wherein the step of setting the position of the directional antenna further comprises the steps of:

positioning the directional antenna at a plurality of angles toward the omnidirectional antenna;

recording the bit error rate at each of the angles; and

selecting one of the angles which exhibits a minimal value of the bit error rate to be the position of the directional antenna.

27. (Original) The method according to claim 26, wherein the plurality of angles are selected by first locating an initial position beyond which communication using the directional antenna is not possible.

28. (Original) The method according to claim 25, further comprising the step of setting a power of transmission of the directional antenna to a minimum value required to communicate on the established link.

29. (Original) The method according to claim 28, wherein the step of setting the power of transmission of the directional antenna further comprises the steps of:

setting the power of transmission to a default value;

recording a bit error rate at the default value;

successively reducing the power of transmission until connectivity is lost or the bit error rate crosses a threshold; and

setting the power of transmission to be a value that results in the bit error rate staying below the threshold.

30. (Original) The method according to claim 29, wherein the threshold is a maximum acceptable value for the bit error rate.

31. (Cancel)

32. (Currently amended) The method according to claim 25, wherein at least one of the selected wireless devices is an end-user device.

57. (Currently amended) Computer program instructions for dynamically tuning a directional antenna of a wireless device for communicating with an access point in a short-range wireless networking environment, the computer program instructions embodied on one or more computer readable media and comprising:

computer program instructions for communicating with at least one wireless device;

computer program instructions for communicating with at least one access point;

computer program instructions for establishing a network link between a selected one of the wireless devices and a selected one of the access points using the directional antenna of the selected wireless device and an omnidirectional antenna of the selected access point; and

computer program instructions for setting a position of the directional antenna to minimize a bit error rate along the established link;

wherein the selected wireless device is an extension point device having a portable energy source.

58. (Original) The computer program instructions according to claim 57, wherein the computer program instructions for setting the position of the directional antenna further comprise:

computer program instructions for positioning the directional antenna at a plurality of angles toward the omnidirectional antenna;
computer program instructions for recording the bit error rate at each of the angles; and
computer program instructions for selecting one of the angles which exhibits a minimal value of the bit error rate to be the position of the directional antenna.

59. (Original) The computer program instructions according to claim 58, wherein the plurality of angles are selected by first locating an initial position beyond which communication using the directional antenna is not possible.

60. (Original) The computer program instructions according to claim 57, further comprising computer program instructions for setting a power of transmission of the directional antenna to a minimum value required to communicate on the established link.

61. (Original) The computer program instructions according to claim 60, wherein the computer program instructions for setting the power of transmission of the directional antenna further comprise:

computer program instructions for setting the power of transmission to a default value;
computer program instructions for recording a bit error rate at the default value;
computer program instructions for successively reducing the power of transmission until the bit error rate crosses a threshold; and
computer program instructions for setting the power of transmission to be a value that results in the bit error rate staying below the threshold.

62. (Original) The computer program instructions according to claim 61, wherein the threshold is a maximum acceptable value for the bit error rate.

63. (Currently amended) The computer program instructions according to claim 57, wherein at least one of the selected-wireless devices is an end device.

77. (Currently amended) A system for dynamically tuning a directional antenna of a wireless device for communicating with an access point in a short-range wireless networking environment, comprising:

at least one wireless device;

at least one access point;

means for establishing a network link between a selected one of the wireless devices and

a selected one of the access points using the directional antenna of the selected wireless device and an omnidirectional antenna of the selected access point; and

means for setting a position of the directional antenna to minimize a bit error rate along the established link;

wherein the selected wireless device is an extension point device having a portable energy source.

78. (Original) The system according to claim 77, wherein the means for setting the position of the directional antenna further comprises:

means for positioning the directional antenna at a plurality of angles toward the omnidirectional antenna;

means for recording the bit error rate at each of the angles; and

means for selecting one of the angles which exhibits a minimal value of the bit error rate to be the position of the directional antenna.

79. (Original) The system according to claim 78, wherein the plurality of angles are selected by first locating an initial position beyond which communication using the directional antenna is not possible.

80. (Original) The system according to claim 77, further comprising means for setting a power of transmission of the directional antenna to a minimum value required to communicate on the established link, further comprising:

means for setting the power of transmission to a default value;

means for recording a bit error rate at the default value;

means for successively reducing the power of transmission until the bit error rate crosses a threshold; and

means for setting the power of transmission to be a value that results in the bit error rate staying below the threshold.

81. (Original) The system according to claim 80, wherein the threshold is a maximum acceptable value for the bit error rate.

82. (Original) The system according to claim 80, wherein the portable energy source is rechargeable.